

Claims

1. Device for controlling an electromechanical regulator which has an actuator (12) and an actuating drive (11) with

- an electromagnet having a coil (113),
- a movable armature and
- a return mechanism mechanically coupled to the armature,

in which:

- a controller (3a) is provided which controls the current through the coil (113) and which for that purpose produces control signals for a power regulator (5a, 5b), and

- during the operation of the armature the control signals depend on the current and the time differential of the current through the coil (113) in the free-running operating state.

2. Device as in Claim 1, characterized in that the control signals, if the armature has moved for longer than a preset time delay (TD1) up to the end of the armature movement, depend on the current and the time differential of the current through the coil (113) in the free-running operating state.

3. Device as in ~~one of Claims 1 or 2~~ ^{claim 1}, characterized in that, in the free-running operating state, the potential difference on the coil is given by the potential difference at the power regulator's electronic components operating in the conductive state and resistor R.

4. Device as in ~~one of Claims 1 through 3~~ ^{claim 1}, characterized in that the control signals depend on the ratio of the time differential of the current and the current through the coil (113).

5. Device as in Claim 4, characterized in that energy is supplied to the coil if the ratio falls below a preset threshold value and that energy is drained from the coil if the ratio exceeds a preset threshold value.

6. Device as in ~~one of Claims 4 or 5~~ ^{claim 5}, characterized in that energy is supplied to the coil for a preset time delay (TD2) if the ratio falls below the preset threshold value, and energy is drained from the coil for a preset time delay (TD3) if the ratio exceeds the preset threshold value.

claim 5
7. Device as in ~~one of Claims 4 or 5~~, characterized in that energy is supplied to the coil (113) until the current through the coil (113) has increased by another preset threshold value if the ratio falls below the preset threshold value, and that energy is drained from the coil (113) until the current through the coil (113) has decreased by the other preset threshold value if the ratio exceeds the preset threshold value.

claim 1
8. Device as in ~~one of the above Claims~~, characterized in that the controller (3a) is designed as a two-position controller.

claim 1
9. Device as in ~~one of the above Claims~~, characterized in that the controller (3b) is designed as a three-position controller.

claim 1
10. Device as in ~~one of the above Claims~~, characterized in that the actuating drive has another electromagnet with another coil (115) and has another return mechanism, and that another controller is provided which regulates the current through the other coil (115).